**IN THE CLAIMS**:

25. (original) A method for manufacturing a three-zone microporous membrane, the method comprising the steps of:

providing at least one vessel for containing a ternary phase inversion polymer mother dope;

formulating a ternary phase inversion polymer mother dope in the at least one vessel to effect dissolution and equilibrium mixing of the polymer, solvent and nonsolvent;

maintaining the mother dope in the vessel at a temperature sufficient to stabilize and maintain the dope formulated after cooling from the formulation temperature;

providing a dope processing site having at least one dope application means;

operatively connecting the at least one vessel to the dope processing site such that the mother dope is transported from the at least one vessel to the dope processing site;

operatively positioning at least one thermal manipulation means between the at least one vessel and the dope processing site;

thermally manipulating the mother dope transported from the at least one vessel in the at least one thermal manipulation means into any one of a plurality of different possible pore size producing dopes; and

applying a predetermined one of the plurality of different possible pore size producing dopes received from the at least one thermal manipulation means to a scrim at the dope processing site to produce reinforced, three-zone microporous membrane.

26. (original) The method of claim 25 further comprising the steps of:

operatively positioning at least a second dope application means at the dope processing site;

operatively positioning at least a second thermal manipulation means between the at least one vessel and the at least a second dope application means;

thermally manipulating the mother dope transported from the at least one vessel in the at least second thermal manipulation means into a predetermined one of a plurality of different possible pore size producing dopes; and

applying the predetermined one of the plurality of different possible pore size producing dopes received from each of the two thermal manipulation means to a scrim that has had a thermally manipulated dope applied thereto from one of the at least two thermal manipulation means to produce reinforced, three-zone microporous membrane.

27. (original) The method of claim 26 further comprising the steps of:

operatively positioning at least a third dope application means at the dope processing site;

operatively positioning at least a third thermal manipulation means between the at least one vessel and the at least third dope application means;

thermally manipulating the mother dope transported from the at least one vessel in at least the third thermal manipulation means into a predetermined one of a plurality of different possible pore size producing dopes; and

applying the predetermined one of the plurality of different possible pore size producing dopes received from each of the three thermal manipulation means to a scrim at the dope processing site to produce reinforced, three-zone microporous membrane.

28. (original) The method of claim 27 further comprising the steps of:

providing at least a second vessel for containing a ternary phase inversion polymer mother dope, the dope having been exposed to a mixing temperature sufficient to effect dissolution and equilibrium mixing of the polymer, solvent and nonsolvent, the vessel and the dope contained therein being maintained at a temperature sufficient to stabilize and maintain the mixture after cooling from the mixing temperature.

29. (original) The method of claim 27 further comprising the steps of:

providing at least a third vessel for containing a ternary phase inversion polymer mother dope, the dope having been exposed to a mixing temperature sufficient to effect dissolution and equilibrium mixing of the polymer, solvent and nonsolvent, the vessel and the dope contained therein being maintained at a temperature sufficient to stabilize and maintain the mixture after cooling from the mixing temperature.

30. (original) The method of claim 28 wherein during the thermal manipulation step, the temperature of the mother dope is incrementally elevated to a temperature no higher than within about ±0.15°C of the predetermined temperature.

53. Canceled.

54. (New) A method for manufacturing three-zone microporous membrane, the method comprising the acts of:

providing at least one vessel for containing a ternary phase inversion polymer mother dope;

providing a dope processing site;

providing at least one pressure means, operatively connected to the at least one vessel, and the dope processing site for moving the dope from the at least one vessel to the dope processing site;

providing a dope transportation system, operatively connected to the at least one vessel and the dope processing site, for transfer of the dope from the vessel to the dope processing site;

providing at least one thermal manipulation means, operatively connected to the at least one vessel and the dope processing site, for transforming the dope from the at least one vessel into any one of a plurality of different possible pore size producing dopes; and

providing at least three dope application means, operative at the dope processing site and operatively connected to the at least one thermal manipulation means, for applying the dope at the dope processing site to form three-zone microporous membrane.

55. (New) The method of claim 54 further comprising the acts of:

operatively connecting at least a second thermal manipulation means to the at least one vessel, the dope transportation system and at least one of the three dope application means; and

transforming the dope into any one of a plurality of different possible pore size producing dopes for application at the dope processing site by the at least one of the three dope application means.

56. (New) The method of claim 55 further comprising the acts of:

operatively connecting at least a third thermal manipulation means to at least one vessel, the dope transporting system and at least another one of the three dope application means; and

transforming the dope into any one of a plurality of different possible pore size producing dopes for application at the dope processing site by the at least a third dope application means.

57. (New) The method of claim 54 further comprising the acts of:

operatively connecting at least a second and a third thermal manipulation means to the at least one vessel and at least two of the three dope application means respectively; and

transforming the dope pumped from the at least one vessel to the second and the third thermal manipulation means into any one of a plurality of different possible pore size producing dopes for application at the dope processing site.

58. (New) The method of claim 54 further comprising the acts of:

operatively connecting at least a second vessel to the dope transporting means, for containing a ternary phase inversion polymer dope.

59. (New) The method of claim 58 further comprising the acts of:

operatively connecting at least a third vessel to the dope transporting system, for containing a ternary phase inversion polymer dope.

60. (New) The method of claim 54 further comprising the acts of:

operatively connecting bypass means to the at least one thermal manipulation means, for diverting dope being transported from the at least one vessel to the dope processing site such that the dope is not processed by the at least one thermal manipulation means prior to delivery to the dope processing site.

61. (New) The method of claim 55 further comprising the acts of:

operatively connecting bypass means to the at least the second thermal manipulation means, for diverting dope from at least one vessel to the dope processing site such that the dope is not processed by the at least second thermal manipulation means prior to delivery to the dope processing site.

62. (New) The method of claim 56 further comprising the acts of:

operatively connecting bypass means to at least the third thermal manipulation means, for diverting dope from the at least one vessel to the dope processing site such that the dope is not processed by the at least third thermal manipulation means prior to being delivered to the processing site.

63. (New) The method of claim 54 wherein the thermal manipulation means further comprises the acts of:

operatively positioning heating means in the at least one thermal manipulation means, for elevating the temperature of at least a portion of the dope to a temperature within about ±0.2°C of a predetermined temperature, the predetermined temperature being selected from a calibrated characterization curve which describes the relationship between the dope being processed and the resulting pore size in at least one zone of the three-zone microporous membrane.

64. (New) The method of claim 63 wherein the thermal manipulation means further comprises the acts of:

operatively connecting cooling means to the at least one thermal manipulation means, for cooling the dope after processing by the thermal manipulation means to a temperature such that the dope has a viscosity sufficient for processing by any one of the three dope application means to produce a microporous phase inversion membrane.

65. (New) The method of claim 63 further comprises the acts of

operatively connecting first heating means to the at least one thermal manipulation means,, for elevating the temperature of at least a portion of the dope to a temperature within about 2°C below the predetermined temperature; and

operatively connecting second heating means to the first heating means, for further elevating the temperature of at least a portion of the dope to a temperature no higher than within about ±0.2°C of the predetermined temperature.

66. (New) The method of claim 65 further comprises the acts of;

further elevating the temperature of the dope to a temperature no higher than within about ±0.15°C of the predetermined temperature utilizing the second heating means.

67. (New) The method of claim 54 further comprising the act of:

operatively positioning means for controlling the thickness of the dope during application by the application means between the vessel containing the ternary phase inversion polymer and the dope processing site.

68. (New) The method of claim 54 further comprising the acts of:

operatively positioning means, for controlling the coating weight of the dope during application by the application means between the vessel containing the ternary phase inversion polymer and the dope processing site.